

**IMAGE DETECTOR METHOD AND APPARATUS INCLUDING POLURAL
DETECTOR REGIONS AND IMAGE ILLUMINATORS**

Field of the Invention

5 The present invention relates to digital camera, and particularly although not exclusively, to a digital camera configured to obtain an image of a document.

Background to the Invention

10 Digital cameras are known in the prior art and in their simplest form comprise a light, typically a flash light, a sensor containing image sensitive nodes and image storage nodes, a lens or series of lenses and a memory bank. The digital camera is known to be employed as an image capture device for capturing images of documents, and in operation is held in a fixed position over a document. The flash light is then triggered thus illuminating the document. The
15 lens serves to focus the image onto the light sensitive nodes and the image is transferred to light storage nodes within the sensor. The final image is read out to a suitable memory bank where it is stored indefinitely awaiting a final process, for example, downloading onto a computer hard-drive or floppy disk.

20 However, a digital camera employed in this manner as a document image capture device has severe limitations due to the phenomena of specular reflections. Typically, most documents consist of a glossy material, which reflects light to a large extent. When the flashlight of the digital camera is triggered, high energy specular reflected light is incident on the light sensitive nodes of the
25 sensor resulting, ultimately, in a glare spot within the final image, this glare spot effectively masking certain features of the document.

 The problem of glare spots has been recognised in a different field (medical imaging - imaging of the cervix for detection of cervical cancer). US Patent No.
30 6088612 proposes a solution in which two light sources are used, and the glare-affected parts of an image taken with one light source are replaced by the glare-

Ok to enter.
- to H 1/23/05